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A Comprehensive Family Centered HIV Care and Support Centre at the Gertrude's Children's Hospital, Nairobi, Kenya

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Abstract

Background: Gertrude's Children's Hospital is committed towards fostering equitable access of HIV treatment, care and support to all individuals irrespective of age, gender, race and socio-economic status through the Sunshine Smiles Clinics initiative. The initiative aims to scale up comprehensive family centered care and support services, build capacity of healthcare workers to manage HIV services and enhance patient care through improvement of infrastructure.

Methods and Findings: Outreach clinics are set up in slum and hard-to-reach areas, which have poor access to basic healthcare services. Initiative awareness and recruitment of patients is done through voluntary counseling and testing drives. Clinic services are provided at no cost to the patient. These include: HIV counseling and testing, provision of antiretroviral therapy (ART), treatment of opportunistic infections as well as nutritional and psychosocial support. There are currently 2,029 patients active in the program; of these 1,872 are on ART. Majority of the patients enrolled into the program are adults above the age of 21 years (59.73%) followed by children aged or under the age of 14 years (27.01%). The clinic numbers display a feminized trend; females represent a great majority of patients across all age groups. The initiative has successfully provided nutritional support to 321 families, 501 pregnant and breastfeeding mothers, 336 children aged or under the age of 14 years and 608 adults. The hospital social workers have also facilitated placements of 61 orphaned and vulnerable children to children's homes through the legal system. A total of 254 healthcare workers have been trained in managing and providing HIV services through the satellite model.

Conclusion: These efforts are in line with the Kenya HIV/AIDS Strategic Framework which aims to address the HIV response based on a strategic and sustainable approach.

Keywords: Equity; HIV; Holistic; Family-centered care

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Introduction

The recently published Kenya AIDS Response Progress Report places a key emphasis on Kenya's commitment towards the global targets: zero new infections, zero AIDS-related deaths and zero discrimination [1]. In the year 2014, the HIV prevalence rate in Kenya was 5.3% and there were approximately 1.4 million people living with HIV across the country. The epidemic displays a feminized trend; 58.3% (700,000) of the infected adults are female [2]. The current antiretroviral therapy (ART) coverage for HIV infected adults is 51% and for children aged between 0-14 years, coverage is 36%. This demonstrates that although Kenya is dealing with a generalized and stable HIV epidemic, the provision of care and treatment across all age groups remains a matter of great concern.

The Kenya HIV/AIDS strategic framework is in place to foster equitable access to treatment, care and support services to all HIV infected individuals [3]. This means that the policies put in place must ensure there are no avoidable or remediable differences in the dissemination and access of HIV services among groups of people regardless of socio-economic status, demographic

characteristics and geographic location [4]. Gertrude's Children's Hospital, Kenya (Gertrude's) supports the National HIV/AIDS Framework and is committed towards fostering equitable access of HIV services to all individuals through the Sunshine Smiles Clinic initiative. This initiative was launched in the year 2010, with three key objectives: 1) scale up comprehensive family centered prevention, treatment, care and support services; 2) build capacity of healthcare workers within the satellite clinics to manage HIV services and provide comprehensive care and 3) enhance patient care through improvement of infrastructure.

Gertrude's is focused on the provision of healthcare services primarily to paediatric patients; thus the Sunshine Smiles initiative was initially tailored for children only. However it was realized that the patients' families had a significant impact on the treatment outcomes of the HIV infected children. Furthermore, in most cases more than one family member was also HIV infected while the rest were affected; for the HIV infected neonates, infection was from their mothers before or during childbirth or through breastfeeding. The program is now based on a family-centered model as previously described by Kulzer et al. [5]. The index patient is the HIV infected child and the initiative aims to involve all HIV infected and affected family members through the provision of treatment, care and support. This has resulted in a reduction of the lost to follow up cases and improved adherence to treatment. With the improved adherence to treatment and optimal family support, the children will live longer, healthier lives and achieve their full potential especially academically.

'Gertrude's and its satellites serve patients who largely have access to healthcare financed by their employers, health insurance covers or out of pocket payments. However to ensure healthcare services at the hospital are provided based on the principles of equity; the Sunshine Smiles Clinic initiative is tailored for individuals based in slum and hard-to-reach areas, who have limited resources, and poor access to basic healthcare services. The initiative is being implemented in low income population areas in Nairobi with the target population being people living in informal housing, without access to clean drinking water and in many cases not served with formal healthcare facilities. The main target areas of Githogoro and Mathare have a combined population of about 50,000. The families in these population often have a double the national average birth rates, higher neonatal and infant mortality rates, and double the rate of teenage pregnancies. Whereas access to family planning commodities in Nairobi is at 58% for this populations that is even much lower. This is a report on the achievements of the initiative since its launch in the year 2010 through to December 2015.

Methods

The sunshine smiles clinic

The initiative was launched in the year 2010 at the hospital main campus in Muthaiga, Kenya. Since then, three outreach clinics have been opened across Nairobi County: Githogoro, Komarock and Embakasi. These clinics are set up in urban slums so as to foster equity in the provision of HIV-linked services.

Family centered approach

The Sunshine Smiles Clinic services are based on a family centered approach. Children presenting at any of the Gertrude's Children's Hospital satellite clinics, with a history and clinical signs and symptoms of HIV are tested for HIV. In addition routine screening is provided for children previously exposed to HIV. The children's parents also have the opportunity to undergo HIV testing during any routine healthcare visits as they accompany the children to the hospital. This is in line with the Kenya government guidelines for provider initiated testing principle.

All children confirmed to be HIV infected are enrolled into care. The child represents the index patient and if the family members are diagnosed with HIV, the entire family is enrolled into care and receives psychosocial support, prevention of opportunistic infections and ART where indicated. If the family members are HIV negative, they are enrolled into a family focused arm of the program to support the child so as to ensure the child adheres to treatment and attends all clinic appointments. For all children above the age of 13 years, the child is attached to a 'treatment buddy' (another HIV infected patient to provide peer support).

Clinic staff

The clinic comprises of a multidisciplinary team, dedicated to the provision of clinical, nutritional and psychosocial care to children and their families. Each clinic has a medical doctor, nurse, counselor, pharmacist, laboratory technologist, data manager, nutritionist and an expert patient. Expert patients are individuals who have benefitted from the initiative, with additional training in HIV treatment, care and support.

Patient recruitment

Awareness of the initiative and recruitment of patients is done by community health volunteers, expert patients and social workers through voluntary counseling and testing drives which are conducted either door to door, in schools, children's homes and day care centres, during youth outreach events and during medical camps.

Services offered at the clinics

All patients presenting to the clinics benefit from the services at no cost to them. These include: HIV counseling and testing; ART care and support; screening and treatment of opportunistic infections and nutritional support which involves assessment, care and education as well as food and supplement distribution to the malnourished. The patients also receive psychosocial support through play therapy, child fun days, treatment literacy, youth forum seminars, life skills training, adolescent-adult transition trainings and caregiver seminars, and through prevention of mother to child transmission and mother to mother support group services. To curb HIV related stigma the hospital staff conduct literacy awareness meetings. There are also no signboards labeling the sites as HIV clinics. Instead these services are integrated with general clinic services including family planning, outpatient services, mother and child antenatal, postnatal and immunization services.

Antiretroviral therapy: All children below the age of 10 years

with a confirmed HIV diagnosis and all pregnant and or breastfeeding mothers confirmed to be HIV infected, are initiated on life-long ART. This is regardless of the patient's CD4 count and or viral load measurements. For all other groups, ART is initiated to patients with CD4 counts below 500 cells/mm^3. The initiation of treatment is based on the National Guidelines for Antiretroviral Therapy in Kenya (updated July 2014).

CD4 count and viral load monitoring: CD4 counts are measured and tracked at least once annually both as a measure of immunity improvement and also for those not yet on ART to determine when treatment will be initiated. Viral loads are also evaluated to monitor the effectiveness of treatment.

Nutritional support: To determine the patient's nutritional status, anthropometric assessments are performed at all clinics. These include weight, height, head and mid upper arm circumferences as well as skin fold thicknesses. Additional assessments include home visits by the social workers so as to determine the patients in need of food basket support. Families enrolling into the food basket programs are empowered through income generating trainings. Food supplements by prescription are also provided for patients who are malnourished.

Follow-ups: Home visits are conducted on a monthly basis to foster adherence to ART regimens, provide home-based care to patients who are unable make it to the hospital clinics. Weekly follow-ups are done for the malnourished patients to ensure food security does not interfere with the treatment outcomes. All patients are attached to a community health volunteer and lost to follow up cases are tracked using a rich defaulter tracing system which has been adopted by the hospital. Patients who are lost to follow up for more than three (3) months are termed as 'defaulters'. In the event that they are completely unreachable, the patient files are closed; and the number of defaulters updated in the system but patient data is maintained. In case they re-appear, close monitoring through counseling sessions and home visits are conducted for a period of one month to assess commitment and to close any gaps on treatment literacy. The patient is then attached to a community health worker who provides weekly reports on adherence to clinic appointment including reasons for any non-adherence.

Data management

The clinics data staff manage all data and to ensure the records remain confidential; all patients are assigned unique hospital identifier numbers. Manual health records are used for patient management to document patient information, care interventions, diagnostics monitoring, and outcomes of care where required. The program tracks daily visits and carries out a monthly data analysis of the care utilization per service area. For this publication, annual activity for each service offered was summed up and frequencies where applicable determined. The data is summarized into tables in the results section.

Results

Total number of patients active in the program

There are currently 2,029 patients active in the program across all four clinics. The clinics located in Muthaiga and Githogoro were both launched in the year 2010, Komarock clinic in 2011 and the Embakasi clinic in 2012. Altogether, the Sunshine Smiles Clinic initiative has witnessed a 107.25% increase in the number of patients actively on care from 2010 to 2015 **(Table 1).**

Age and gender of the patients enrolled into the program

Majority of the patients are adults above the age of 21 years (59.73%) followed by children aged or under the age of 14 years (27.01%). The clinic numbers display a feminized trend. Females representing a great majority in all groups: children aged or under the age of 14 years (276/548; 50.36%), young adults aged 15-21 years (127/269; 52.79%) and among adults above 21 years (916/1212; 75.58%) **(Table 2).**

Antiretroviral therapy uptake

Of the 2,029 patients actively on care across all clinics, 1,872 (92.26%) have been initiated on ART; the remaining 7.74% are children above the age of 10 years and adults with CD4 cell counts above 500 cells/mm^3. The initiation of treatment is based on the National Guidelines for Antiretroviral Therapy in Kenya (updated July 2014).

Prevention of mother to child transmission

A total of 217 pregnant mothers were enrolled into the Prevention of Mother to Child Transmission (PMTCT) arm of the Sunshine Smiles initiative. Of these, 214 (98.62%) children were born HIV negative as a result of PMTCT initiation during pregnancy. One (1) patient in the year 2013 and 2 patients in the year 2015 were diagnosed with HIV despite PMTCT. This is outlined in **Table 3.**

Outcomes for HIV exposed neonates

Over the period of implementation, a total of 282 neonates were provided care to prevent mother-to-child transmission. These include the 217 neonates born to mothers provided PMTCT services at the Sunshine Smiles. Of the 25 children that ended up HIV positive, three (3) were of parents receiving PMTCT at Sunshine Smile Clinic, as highlighted in **Table 3** and the rest

Table 1 Total number of patients active in the care and treatment initiative across all four clinic sites (2010-2015).

Years	Muthaiga	Githogoro	Komarock	Embakasi	Totals
2010	856	123	-	-	**979**
2011	925	141	98	-	**1164**
2012	1150	143	213	29	**1535**
2013	1307	187	127	89	**1583**
2014	1442	242	142	90	**1916**
2015	1513	288	106	122	**2029**
% Increase per Clinic (2010 – 2015)	**76.75%**	**134.15%**	**8.16%**	**320.69%**	**107.25%**

Table 2 Age and gender profiles of patients active at the Sunshine Smiles Clinic (as at December 2015).

	≤14 Years		15-21 Years		>21 Years		Total
Clinic	**MALE**	**FEMALE**	**MALE**	**FEMALE**	**MALES**	**FEMALE**	
Muthaiga	228	231	106	118	189	631	1503
Githogoro	15	19	8	14	60	178	294
Embakasi	17	12	7	5	16	52	109
Komarock	12	14	6	5	31	55	123
Total	**272**	**276**	**127**	**142**	**296**	**916**	**2029**
Group total (%)	**548 (27.01%)**		**269 (13.26%)**		**1212 (59.73%)**		

Table 3 Number of mothers and children enrolled into the prevention of mother to child transmission arm of the program (2010-2015).

Year	No. Of mothers enrolled into the pmtct program	No. Of children born hiv negative (after pmtct) (%)
2012	50	50 (100%)
2013	56	55 (98%)
2014	59	59 (100%)
2015	52	50 (96%)
TOTAL	217	214 (98.62%)

Table 4 Outcomes for HIV exposed neonates at the Sunshine Smiles clinics.

Year	Number enrolled	No. of negative children	Percentage of hiv negative children
2012	66	59	89%
2013	65	60	92%
2014	74	67	91%
2015	77	71	92%
Total	282	257	91%

Table 5 Lost to Follow up cases at the Sunshine Smiles clinics (2010-2015).

Year	No. of Active Patients	No. Lost to Follow Up	Percentage Lost to Follow Up
2010	979	52	5.31
2011	1164	47	4.04
2012	1535	75	4.89
2013	1583	91	5.75
2014	1961	57	2.91
2015	2029	55	2.71
Average			**4.27**

twenty two (22) were either abandoned neonates brought in from children's homes or neonates of mothers that transferred into the Sunshine Smiles program soon after delivery.

Nutritional support

In addition, of the entire 2,029 patients active in the care and treatment program, 321 needy families were given food baskets, 501 breastfeeding mothers, 336 children aged or under the age of 14 years, and 608 adults who were diagnosed with malnutrition have been supplied with food baskets and supplements by prescription. Furthermore, a total of 21 medical camps have been conducted across the community areas and a total of 254 healthcare workers have been trained in managing and providing HIV services through the satellite model. The hospital social workers have facilitated placements of 61 orphaned and vulnerable children aged or under the age of 14 years to children's homes through the legal system **(Table 4).**

Lost to follow up cases

An average of 4.72% patients have been lost to follow up since the launch of the initiative in 2010 to-date as outlined in **Table 5.**

Implementation barriers

HIV positive children and their families still face challenges with stigma and discrimination in the community. Despite these being free services, the uptake and utilization is still not optimal hence the need for mobilization using social workers. Disclosure of HIV status to children born with HIV is still a big challenge because the parents of fear of blame from the children. In turn, this affects adherence to treatment until when the children are old enough to make their own decisions.

Discussion

The Sunshine Smiles Clinic initiative has had a transformational impact across urban slums in Nairobi. Slums provide a fertile environment for the rapid spread of HIV due to overcrowding in low quality housing, poor sanitation, high levels of unemployment, poor education and poor socioeconomic opportunities [6]. All these contribute to poor health seeking behaviors and negative health outcomes [7]. Thus, through the initiative, individuals who would have otherwise been considered disadvantaged have received and continue to receive comprehensive HIV treatment, care and support.

The care and support programme at Gertrude's is designed to maximize linkage to HIV services based on the WHO global health sector strategies on HIV/AIDS [8]. This is by enhancing broader health outcomes by integrating the program with other healthcare services including mother and child clinic visits thus enhancing broader health outcomes. Furthermore vulnerabilities and structural barriers are removed by providing home-based care to those unable access care and providing psychosocial support for both the infected and affected.

On the global front, women are disproportionately affected by the HIV epidemic. The effect is more severe when the females are affected by socioeconomic inequalities. A recent study highlights trends in socio-economic inequalities that are linked to poor health outcomes [9]. In this study the prevalence of HIV was

higher among women with lower levels of education. This is the picture depicted at Gertrude's where more female patients are infected and this is across all age groups. Thus although Gertrude's is primarily a paediatric healthcare institution, integrating the female patients through to adulthood will ultimately have a huge public health impact. The successes of family centered models, which ensure the entire family is integrated into care, have been seen in other African countries including Uganda [10].

Limitations

This intervention was implemented as a response to a need and hence a true baseline was not done with regard to evaluating the impact of the program. However it is possible to demonstrate that access to care was improved by more patients enrolling into ART.

Conclusion

As the world continues to forge ahead towards achieving the global HIV targets, issues pertaining to inequitable access to care must not be ignored. It is important that the focus should be multifaceted ensuring there is increased access to care, the care should be of good quality and based on international standards and all efforts should ensure there are no avoidable differences in access of these services across all groups.

References

1 (2014) Joint United Nations Programme on HIV/AIDS HIV and AIDS estimates.

2 (2014) Joint United Nations Programme on HIV/AIDS Kenya AIDS Response Progress Report: Progress towards Zero.

3 (2015) National AIDS Control Council Kenya AIDS Strategic Framework.

4 (2016) World Health Organization Health Systems: Equity.

5 Kulzer J, Penner J, Marima R, Oyaro P, Oyanga A, et al. (2012) Family model of HIV care and treatment: a retrospective study in Kenya. J Int AIDS Soc 15: 15-18.

6 Gulis G (2004) Health status of people of slums in Nairobi, Kenya. Environ Res 96: 219-227.

7 Unge C, Johansson A, Zachariah R, Some D, Van Engelgem I, et al. (2008) Reasons for Unsatisfactory Acceptance of Antiretroviral Treatment in the Urban Kibera Slum, Kenya. AIDS Care 20: 146-149.

8 (2011) World Health Organization: The Global Health Sector Strategy on HIV/AIDS 2011-2015.

9 Hargreaves J, Davey C, Fearon E, Hensen B, Krishnaratne S (2015) Trends in Socioeconomic Inequalities in HIV Prevalence among Young People in Seven Countries in Eastern and Southern Africa. PLoS ONE 10: e0121775.

10 Luyirika E, Towle M, Achan J, Muhangi J, Senyimba C, et al. (2013) Scaling Up Paediatric HIV Care with an Integrated, Family-Centred Approach: An Observational Case Study from Uganda. PLoS ONE 8: e69548.